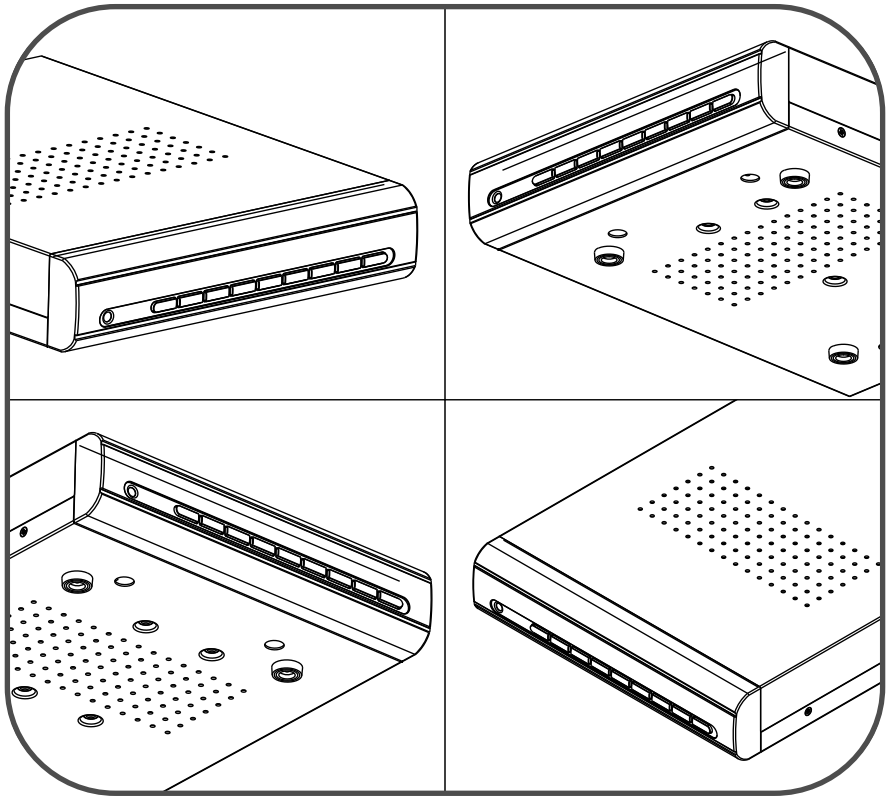
4CH STANDALONE DVR

• MANUAL •



2009 AUG. Ver 1.1

HDD SUPPORT LIST

Warning :
Should you wish to install a new hard drive in this unit, a list of tested hard drives shown to be compatible can be found below.

SATA

Brand	Maxtor	Seagate	HITACHI	WD
Capacity/ Model Number	250GB	250GB	250GB	250GB
	STM3250318AS	ST3250824AS	HDT725025VLA380	WD2500AVVS
	320GB	320GB	320GB	320GB
	STM3320418AS	ST3320310CS	HDT725032VLA360	WD3200AVVS
	500GB	500GB	500GB	500GB
	STM3500418AS	ST3500320SV	HDT725050GLA360	WD5000AVVS
	750GB	750GB		750GB
	STM3750528AS	ST3750330SV		WD7500AACS
	1TB	1TB	1TB	1TB
	STM31000528AS	ST31000528AS	HDT721010SLA360	WD10EVVS

Warning :
The hard drive below is not recommended for this unit

SATA

Brand	HITACHI	Seagats	WD
Capacity/ Model Number	750GB	250GB	250GB
	HDS721075KLA330	ST3250310SV	WD2500AAJS
			320GB
			WD32000AAKS
		500GB	500GB
		ST3500312CS	WD5000AAKS

USB FLASH DISK SUPPORT LIST

Warning：

We recommend having the USB flash disk by using the following USB flash disk support list to ensure the compatibility with the DVR and best performance.

Brand	Capacity	Backup	Remote PC ViewingPASS	Firmware Update
Transcend	4 GB	PASS	PASS	PASS
Transcend	8 GB	PASS	PASS	PASS
Transcend	16 GB	PASS	PASS	PASS
Transcend	32 GB	PASS	PASS	PASS
Adata	1 GB	PASS	PASS	PASS
Adata	4 GB	PASS	PASS	PASS
Adata	8 GB	PASS	PASS	PASS
Adata	16 GB	PASS	PASS	PASS
Adata	32 GB	PASS	PASS	PASS
SONY	4 GB	PASS	PASS	PASS
SONY	8 GB	PASS	PASS	PASS
SanDisk	4 GB	PASS	PASS	PASS
SanDisk	8 GB	PASS	PASS	PASS
SanDisk	16 GB	PASS	PASS	PASS

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1、FEATURES

1、Triplex (Recording, Playback, Network simultaneously)

2、Up to 60fps Recording Speed。

3、USB flash disk backup。

4、Adjust Up/Down/Left/Right screen position。

5、Video Input Signal: NTSC / PAL。

6、Video Compression: Modified MJPEG

7、Manual, Motion, & Programmed。

8、Motion Detection with Adjustable Time Duration。

9、Search Data by Date and Time。

10、Power Recover Auto Restore Record Mode。

11、Hard Disk LED Indicator When Recording。

12、Motion Detection。

13、Audio Recording。

14、SATA Hard Disk。

15、Remote Control (Optional)。

16、XGA Output (TYPE 2)。

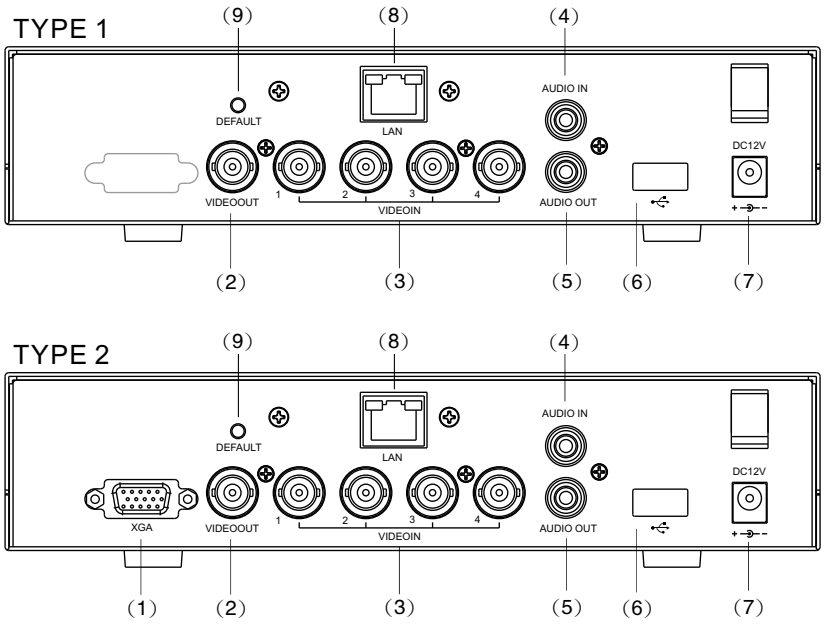
17、LAN (Optional)

2、SPECIFICATIONS

Video Format	NTSC/PAL		
Operating System	Embedded RTOS		
VGA Output	D-SUB 15Pin VGA		
Video Input	BNC x 4 (1Vp-p 75Ω)		
Audio Input	RCA x 1, Line-In		
Video Output	BNC x 1(Main Monitor)		
Audio Output	RCA x 1, Line-Out		
Language	Multi-Language		
Display Frame	NTSC	120 fps (4 × 30 fps)	
	PAL	100 fps (4 × 25 fps)	
Recording Frame	NTSC	Max. 60 fps	
	PAL	Max. 50 fps	
Video Operation	Triplex (Record, Playback, Internet Access)		
Resolution	Display	NTSC	640 x 448
		PAL	640 x 544
	Recording	NTSC	640x224
		PAL	640x272
Compression Format	Modified MJPEG	Normal	12K Bytes / Frame
		High	15K Bytes / Frame
		Highest	20K Bytes / Frame
HDD	SATA HDD x 1		
Backup	USB		
Search	Mode	Time/Date, Event	
	Full Screen	Yes	
Motion Detect	Yes		
Loss Detect	Yes		
Auto Switching	Yes		
Buzzer Output	Yes		
Brightness Adjust	Yes		
Contrast Adjust	Yes		
VGA Output	640*480/800*600/1024*768/1280*1024		
System Monitor	Power Recover Auto Restore Record Mode		
Web Transmission Format	MPEG4		
Power Supply	DC 12V / 3A(AC100V~240V 50/60HZ)		
Dimension	220mm x 228mm x 48mm (WxDxH)		
Weight	1.5KG		

3、INSTALLATION

REAR PANEL



(1) XGA Output (TYPE 2)

(2) Video Output: BNC x 1

(3) Video IN: BNC x 4

(4) Audio Input: RCA x 1, Line-In

(5) Audio Output: RCA x 1, Line-Out

(6) Host USB

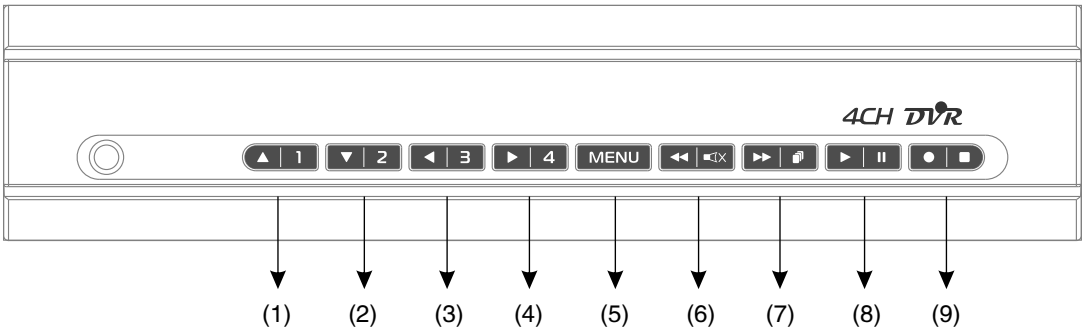
(7)Power Input: For safety reasons, always use the original factory power adaptor attached.

Adaptor：DC-12V / 3A。

(8) LAN Output: (Optional)

(9) DEFAULT：Reset to factory setting.

4、FRONT PANEL



(1) Up Arrow/CH1: Navigate up through menu options/ Camera 1 full screen display

(2) Down Arrow/CH2: Navigate down through menu options/ Camera 2 full screen display

(3) Left Arrow/CH3: Navigate left through menu options/ Camera 3 full screen display

(4) Right Arrow/CH4: Navigate right through menu options/ Camera 4 full screen display

(5) MENU: Menu: Main menu/ Show percentage of the hard drive used.

(6) Fast Reverse/Mute/Set

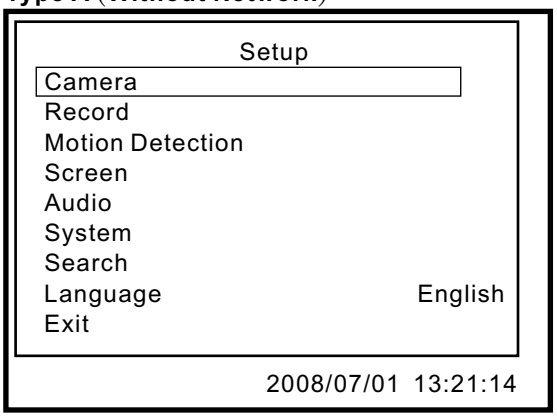
(7) Fast Forward/Sequence Switch

(8) Play/Pause

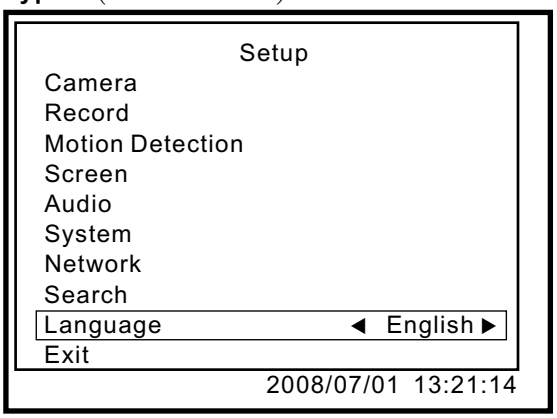
(9) Record/Stop

5、OPERATION MENU

Type A (**Without Network**)

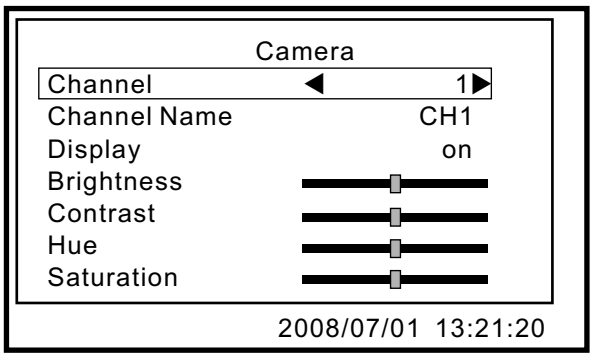


Type B (**With Network**)



Press ▲▼ to select items
Use ◄► to enter
Press MENU to exit

Camera Setup



Press ▲▼ to select items
Use ◄► to enter
Press MENU to exit

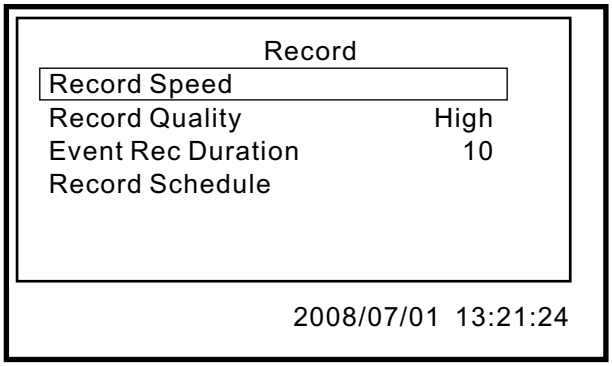
(1)Channel：The diagram above shows Channel 1.

(2) Channel Name：The name of channel is changeable .

(3)Display：Turn On/Off the camera signal .

(4)Brightness/Contrast/Hue/Saturation: Adjust brightness, contrast, hue, and saturation of channel display. The center point is factory default.

Record Setup



Press ▲▼ to select items

Use ◀▶ to enter

Press MENU to exit

(1)Record Speed： Set the number of frame per second (fps).

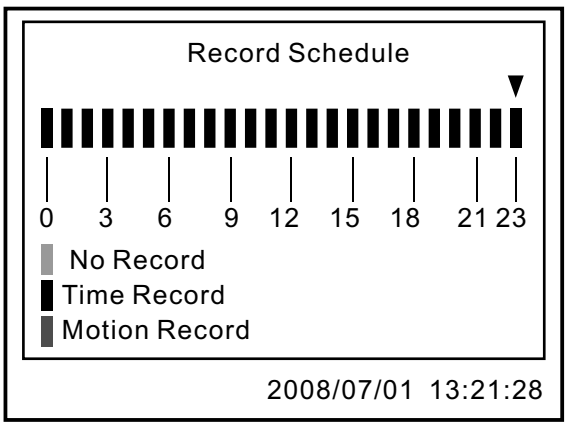
NTSC：default: 15 fps，maximum total frame: 60 fps.

PAL ：default: 12 fps，maximum total frame:50 fps.

(2)Record Quality：Choose video record quality: Highest, High, or Normal.

(3)Event Rec Duration：5、10、15、20、25、30 seconds，
default: 10 seconds.

(4)Record Schedule：



(1)Press ▲▼ to change record method.

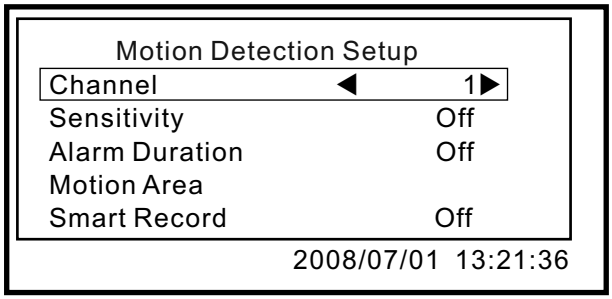
(2)Range: 0-24 hours.

(3)Set “red”for continuous recording.

(4)Set “blue” for motion recording.

(5)Set “gray”to disable the recording.

Motion Detection Setup



Press ▲▼ to select items
Use ◀▶ to enter
Press MENU to exit

(1)Channel：The diagram above shows Channel 1.

(2)Sensitivity：To set Off, or 1 to 4， default: Off.

(3)Alarm Duration：To set alarm duration when alarm is triggered by a moving object: Off, 5, 10, 15, 20, 25, 30 seconds, or continuous.

(4)Motion Area：To select motion detect area.

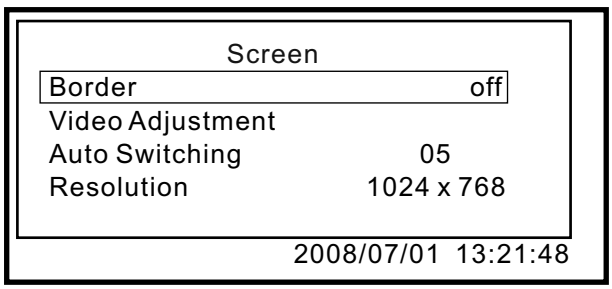
★ **If you want to enable motion recording, please finish the setup procedure a and b.**

a：Set SENSITIVITY level from 1 to 4 in the menu option, Motion Detection Setup

b：Set MOTION RECORDING to GREEN at the time you wish to enable motion recording in the menu option, Record Schedule

(5)Smart Record：Disable in default setting. After enable the setting, system will start recording in 3fps when the motion detection has not been triggered. After the motion detection has been triggered, the recording fps will switch back to the user's setting. The smart record only can set as enable when the motion detection enable.

Screen



Press ▲▼ to select items

Use ◀▶ to enter

Press MENU to exit

(1)Border: Turn On/Off，or show divided lines in quad mode.

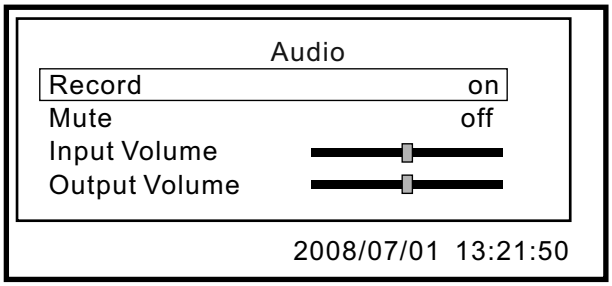
(2)Video Adjustment: Adjust the position of screen display shown.

(3)Auto Switching: Set the duration of each channel: Off, 1 to 10 seconds.

(4)Resolution: XGA

640 x 480 / 800 x 600 / 1024 x 768 (default) / 1280 x 1024

Audio



Press ▲▼ to select items

Use ◀▶ to enter

Press MENU to exit

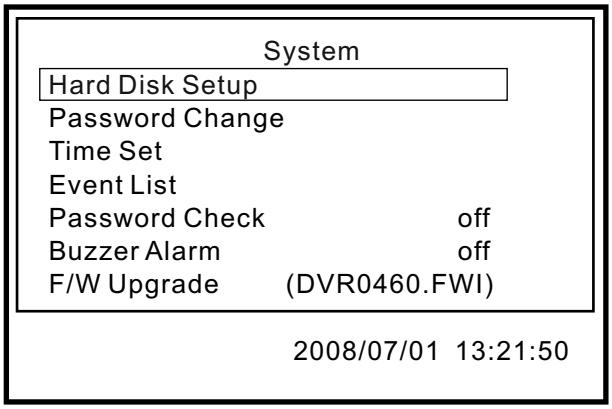
(1) Record： On/Off

(2) Mute ： On/Off

(3) Input Volume： Adjust input volume

(4) Output Volume： Adjust output volume.

System

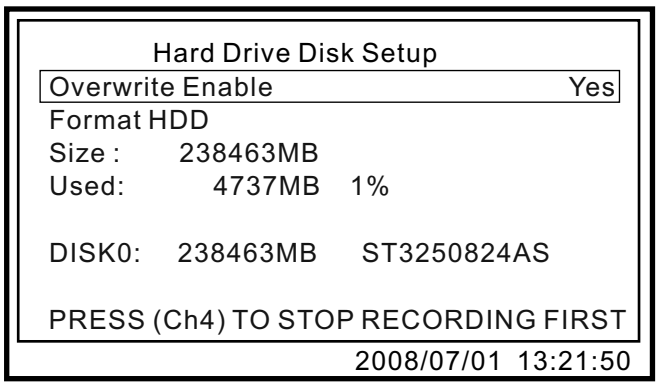


Press ▲▼ to select items

Use ◀▶ to enter

Press MENU to exit

(1) Hard Drive Disk Setup



Press ▲▼ to select items

Use ◀▶ to enter

Press MENU to exit

(1.1) Overwrite Enable:

Enable overwrite when HDD capacity is full:

Yes: When HDD overwrite is taking place, the data is stored in duration of 4 hours per event and being recorded continuously.

No: Stop recording

(1.2)Format HDD： When choose this item, DVR will request for 6 numbers password. If the password is accepted, the DVR will start formatting the HDD. A message, “wrong password” would appear in the screen when the password is entered incorrectly.

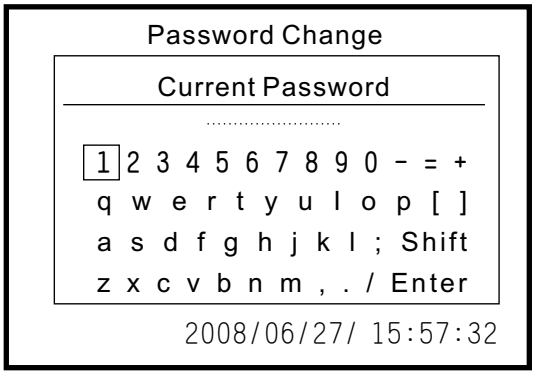
(1.3)HDD Status

Indicates current HDD status, including total capacity and percentage of space being used.

➤ Factory default password setting: 111111

➤ The HDD must be formatted when first time in use.

(2) Password Change **:** ***Password Setup***



Current Password: _____

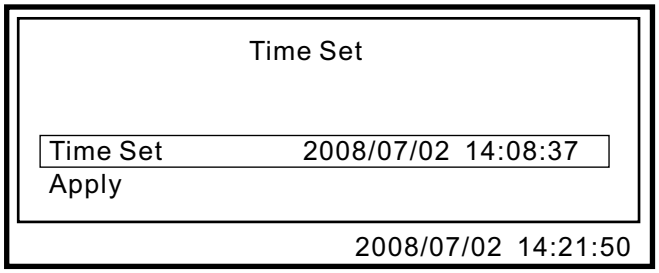
New Password: _____

Confirm Password: _____

➤ When current password is entered incorrectly, a message, “Wrong Password” will appear in the screen.

➤ Factory default Password Setting: 111111.

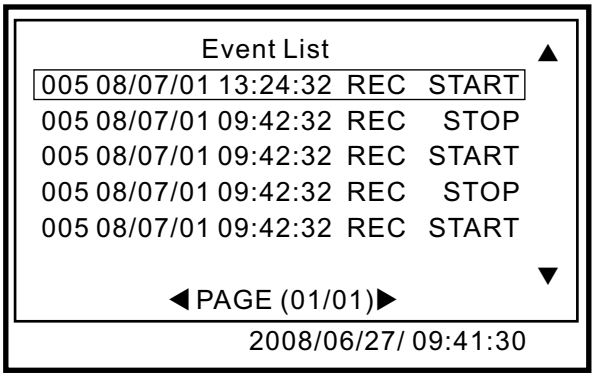
(3) Time Set



(3.1)Time Set：YYYY/MM/DD HH:MM:SS

(3.2)Apply：Update and save all changes.

(4) Event List



(1) You may choose an individual event from the recorded event list.

(2) In the live mode, press the record button to start recording.

(3) Time: the DVR automatically records and saves events in duration of 4 hours.

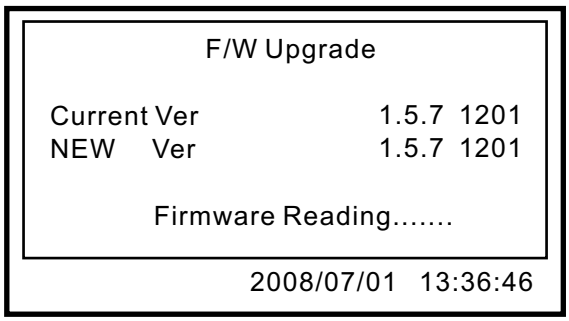
(4) Motion: Motion event list. The symbols, 0 and X represent whether the motion detected function is being activated on each channel.

O-area with motion detection set. X –area without motion detection set.

***(5)Password Check*: *Default is off*, *User need to enter the password to enter* "*Menu*", *or Stop Recording when it is enable*.**

***(6)Buzzer Alarm*: *Default is off*, *The buzzer will be trigged and sounded during video lose or motion detection when it is enable*.**

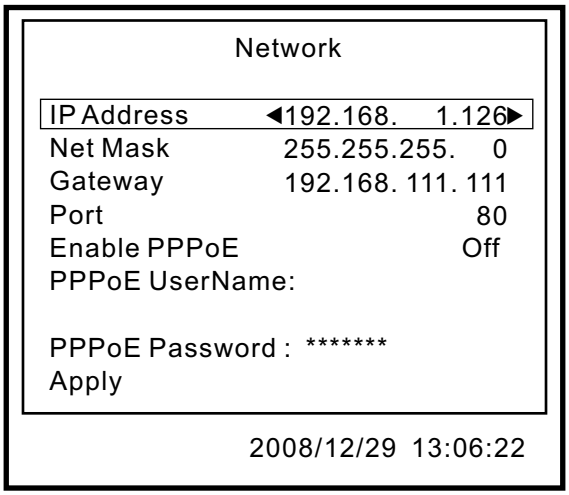
(7) F/W Upgrade:



Please save updated firmware on a USB flash drive. Stick it into USB port.
The screen will show both current version and new version of firmware.

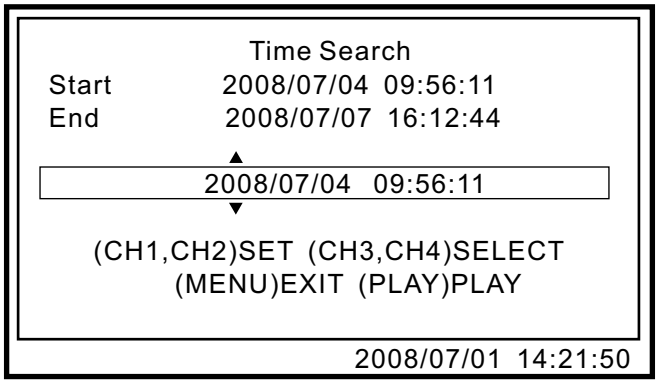
- When update is in progress, please DO NOT operate the unit or remove the USB flash drive to prevent malfunction or system error. After it is completed, turn off and restart the unit.
- There must have a hard drive to store new firmware. Be sure a hard drive must be installed.

Network (For TYPE B with LAN Only)



(1) IP Address: The IP Address of DVR, you can change IP Address by DVR.
(It only support to set Static IP Adress)
(2) Net Mask: Set up Net Mask.
(3) Gateway: Set up Gateway.
(4) Port: Set up AV Port.
(5) Apply: when you change settings, please press “apply” to save configuration.
(6)PPPoE: Enable the PPPoE function
(7)Account: Enter the Account no of PPPoE.
(8)Password: Enter the password of PPPoE.
(9)Save: Click the “save” before exit to confirm the setting changes.

Time Search



(1)Set Search of time, then press "play" button to start playback.

(2)Playback:

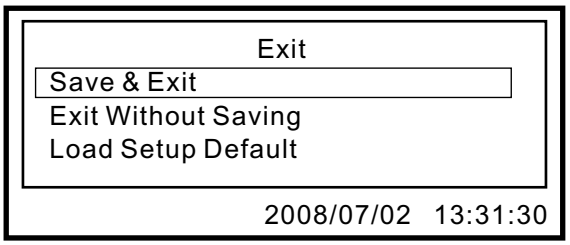
∗Press ▶▶ button for fast forward. Press one more time for faster speed. Total three variable speeds.

∗Press ◀◀ button for fast reverse. Press one more time for faster speed and total three variable speeds.

∗Press ❚❚ button to pause.

∗Press ■ button to stop playback.

Exit

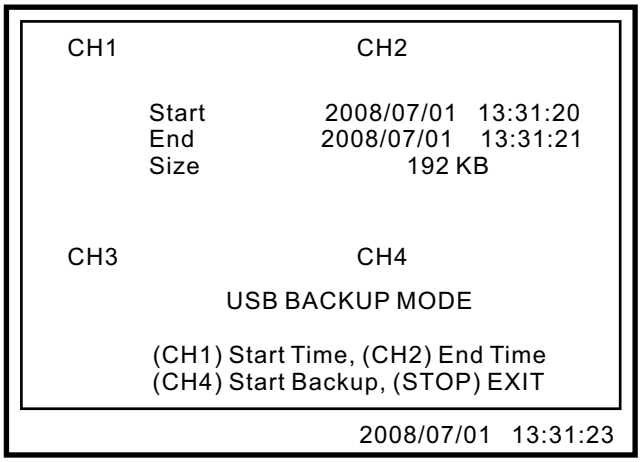


(1) Save & Exit：Save and exit changes.

(2) Exit Without Saving：Exit without saving changes.

(3) Load Setup Default: Load factory default setup

6、BACKUP



(1)Stick USB flash Drive into USB port

(2)Press " ▶ \| II " button，

(3)Press " MENU " button to enter backup menu

(4)Press " ▲ \| 1 " button to setup start time.

(5)Press " ▼ \| 2 " button to setup end time. After setting up both start and end time, the machine will indicate the size of the file.

(6)Press " ▶ \| 4 " button to search for a USB flash drive.

(7)Press " ▶ \| 4 " button to proceed backup process.

(8) When complete, press " ● \| ■ " button to return to LIVE mode.

7、RECORDING PROCEDURE

(1)Press ● button to start recording. The symbol, ● will appear on the top right hand corner of each channel in the screen that indicates it is recording live regardless the recording mode is set on continuous or motion recording.

8、4-CH CONTINOUS RECORDING HOURS ON SATA 400GB HDD

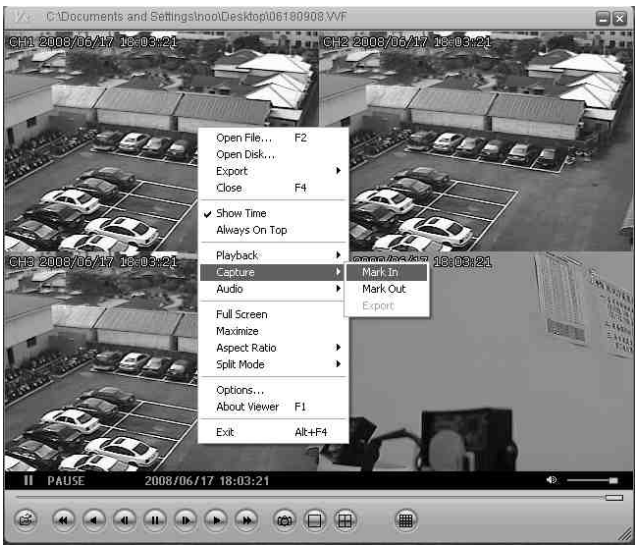
Recording Results in NTSC Standard		60 fps	30 fps	15 fps	1 fps
Video Standard	Video Quality				
NTSC	High	50Hrs	100 Hrs	200 Hrs	3000 Hrs
	Normal	80 Hrs	160 Hrs	320 Hrs	4800 Hrs
	Low	105 Hrs	210 Hrs	420 Hrs	6300 Hrs
Recording Results in PAL Standard		50fps	25 fps	12 fps	1 fps
Video Standard	Video Quality				
PAL	High	45 Hrs	90 Hrs	180 Hrs	2250 Hrs
	Normal	75 Hrs	150 Hrs	300 Hrs	3750 Hrs
	Low	100 Hrs	200 Hrs	400 Hrs	5000 Hrs

9、DVR VIEWER USER GUIDE

1.Playback Recorded File

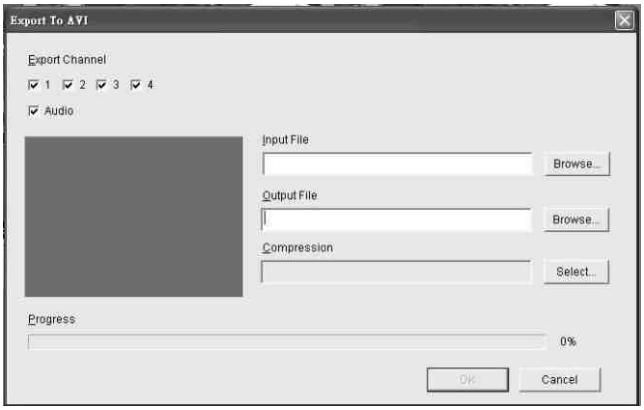
(1.1)Start VVF SLPlayer
(1.2)Point the cursor in the screen and right-click “Open File”. Pick and choose the file you want to view in (.vvf) and play.

2.Capture an image



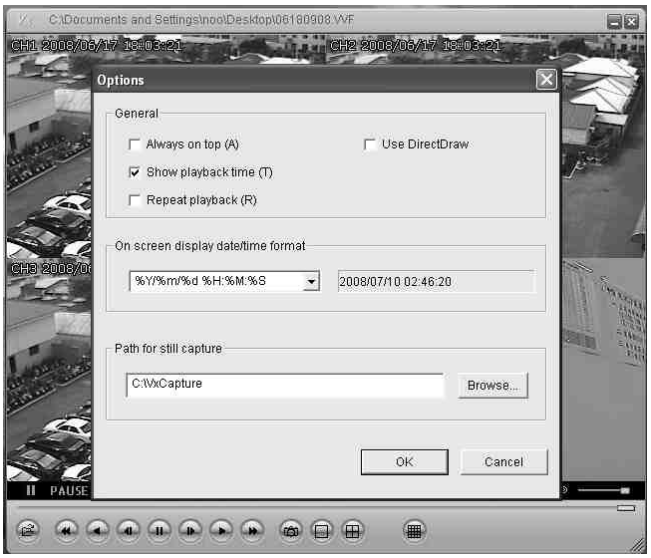
(2.1) During the playback of the backup file, click “Pause”, located on the bottom of the screen.
(2.2) When the image is staying still in the screen, press the right button on the mouse, then pick and choose 「Capture」/「Mark In」. This will set the starting time.
(2.3) Press the “Pause” button to pause playing and recording the images.
(2.4) To end recording, click “Pause”. Press right button on the mouse, then pick and choose 「Capture」/「Mark Out」.
(2.5)Final step, press right button of the mouse, then pick and choose 「Capture」/「Export」

3. Convert File to AVI Format



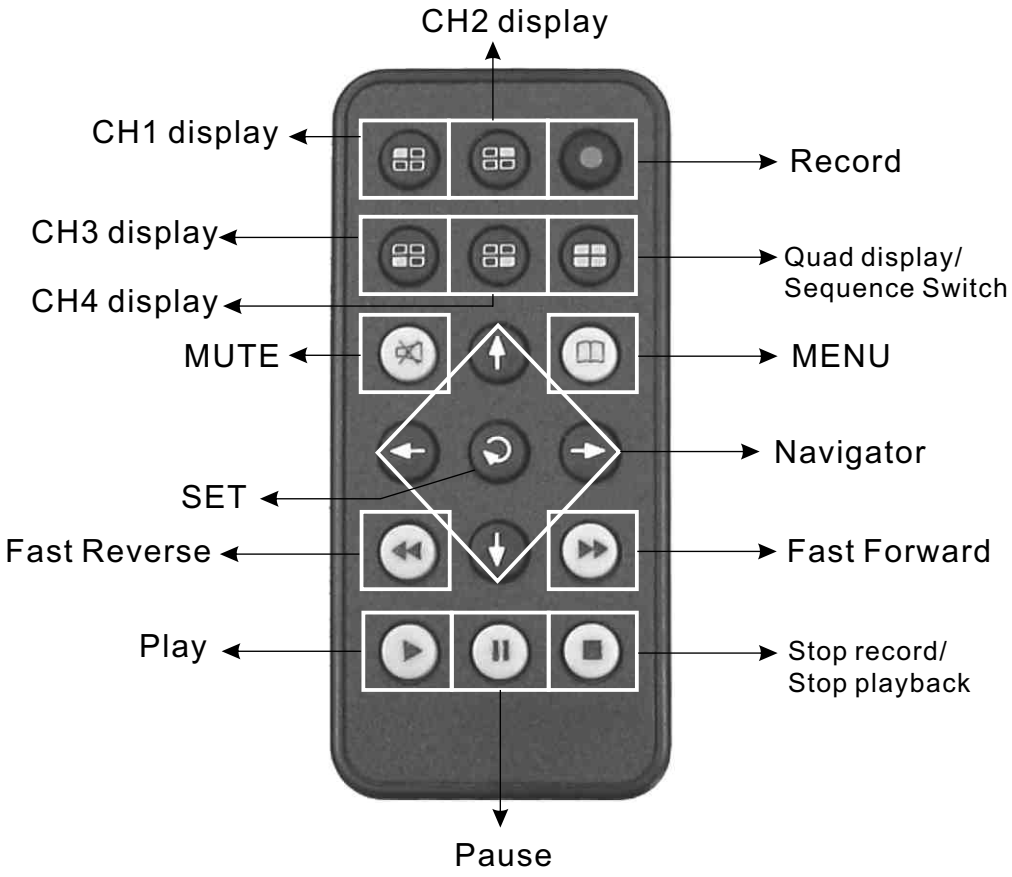
(3.1) Point the mouse cursor to the screen, and press the right button on the mouse, pick and choose「Export」/「AVI」
(3.2) Set Input/Output File 、Compression、Export Channel and Audio.
(3.3) Click “OK” to start converting file to AVI format.

4. Options



(1) Always on top：The sub window always stays on top.
(2) Use DirectDraw：DirectDraw, a part of Microsoft's DirectX is used to render graphics in applications where top performance is important.
(3) Show playback time：Indicates the playback time.
(4) Repeat playback
(5) On screen display date/time format：Indicates date/time.
(6) Path for still capture：Indicates the directory and path name of the file.

10、REMOTE CONTROL GUIDE (OPTION)



4CH STANDALONE DVR

• MANUAL •

H12C460V01